

## ABSTRACT

To detecting a slip state in a contact region of a tire which is rotating on a road surface, first, the first data and second data of measurement data of acceleration at a tread portion of the rotating tire for a duration corresponding to at least one round of tire rotation are acquired in which the first data is measurement data only in the radical direction of the tire or measurement data in the radical and circumferential direction, and the second data is measurement data in the width direction of the tire. Second, time series data of acceleration due to tire deformation from the acquired measurement data in the radial direction is extracted and displacement data is obtained by subjecting the time series data of acceleration due to tire deformation to a time integration of second order, thereby a deformation in the tread portion of the tire is calculated and a contact region of the tire during rotation is determined from the calculated deformation. Next, from the second data, a slip region within the determined contact region is specified based on vibration level of the second data.